

Trend Study 13A-17-04

Study site name: Bar-A.

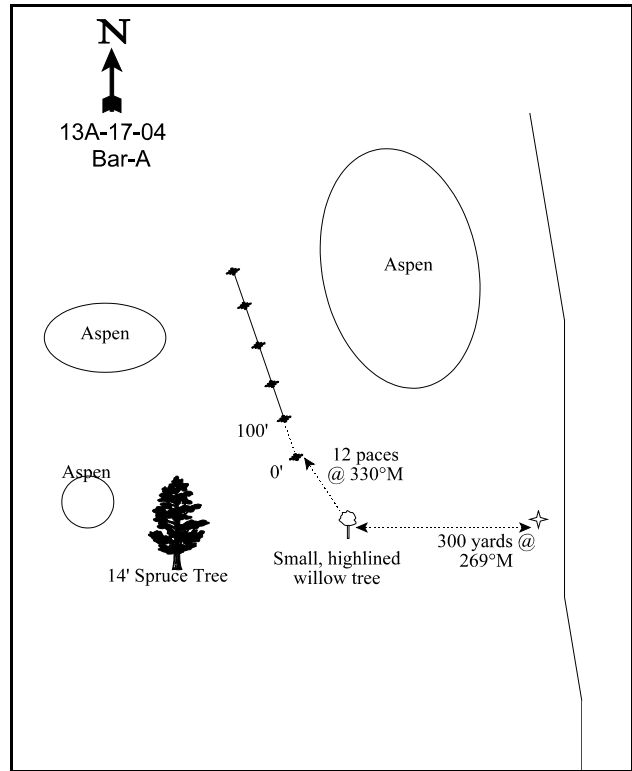
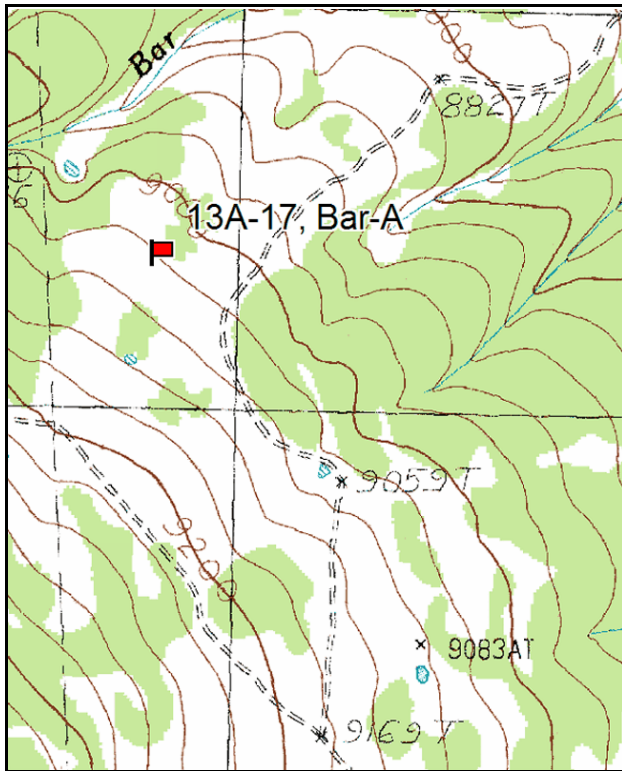
Vegetation type: Aspen Meadow.

Compass bearing: frequency baseline 345 degrees magnetic.

Frequency belt placement: line 1 (11ft), line 2 (34ft), line 3 (59ft), line 4 (71ft), line 5 (95ft).

LOCATION DESCRIPTION

From the intersection of State Road 128 and the LaSal Mountain Loop Road drive 10.9 miles to Gateway Road. From the intersection of the LaSal Mountain Loop Road and the Gateway Road at the upper end of Castle Valley, travel 12.7 miles towards Gateway, Colorado to the Sally Hollow turnoff. Turn right and stay on the main road for 6.7 miles. Take another right and drive 0.7 miles to a fork. Bear right and drive 0.8 miles to a witness post on the left side of the road. From the witness post walk 300 yards at 269°M to a small highlined willow tree. From the willow tree walk 12 paces at 330°M to the beginning of the frequency baseline. The 0-foot stake is marked with a browse tag # 144.



Map Name: Mount Waas

Diagrammatic Sketch

Township 26S, Range 25E, Section Unsurveyed

GPS: NAD 27, UTM 12S 4264347 N, 660791 E

DISCUSSION

Bar-A - Trend Study No. 13A-17

The Bar-A study site was established in 2004 to replace Taylor Flat (13A-9) study site, which has shown little wildlife use in past readings. This site is located on state land just northeast of Mount Tomasaki. This new site is thought to be used heavily by elk and livestock in the spring/summer. The area samples a meadow surrounded by aspen trees. The site has an elevation of 9,000 feet with a north aspect and a slope of about 5-8%. Pellet group data from 2004 estimated 21 elk (51 edu/ha), 7 deer (17ddu/ha), and 44 cow days use/acre (109 cdu/ha).

The soil is classified as a loam. Soil on the site is deep (effective rooting depth of almost 18 inches) with few rocks or pavement on the surface or within the profile. Soil pH is slightly acidic (6.1) with a high amount of organic matter at 6%. Phosphorous could be a limiting factor on the site at 4.9 ppm. Values below 10 ppm may limit normal plant growth and development. The site has good vegetative cover that comes from herbaceous species, which gives the best protection from high intensity summer storms. Percent bare ground is minimal, most exposed soil was from gofer activity. The erosion condition class was determined to be stable in 2004.

Browse species are minimal on this summer range and are not critical to this site. Browse species contribute less than 1% of the vegetative cover. Silver sagebrush is found in patches on the site and is moderately hedged. Other browse species found on the site include Bush cinquefoil and aspen which surrounds the meadow.

Herbaceous vegetation forms a diverse and dense understory. Grasses and forbs are abundant with them providing almost 100% of the total vegetative cover in 2004. Forbs accounted for 60% of the vegetative cover. The most common species include Rocky mountain iris, western yarrow, aster spp., and orange sneezeweed. Rocky mountain iris and orange sneezeweed are both increasers with grazing. They are also poor in forage value for wildlife and livestock. Rocky mountain iris accounts for 17% of total vegetation and orange sneezeweed, which is considered poisonous to livestock and wildlife, accounts for 6%. Grasses are also quite dense providing 40% of the vegetative cover in 2004. Kentucky bluegrass makes up the bulk of the grass cover. Other common species include Thurber fescue, Intermediate wheatgrass, and Subalpine needlegrass. The majority of the herbaceous species on this site are increasers with heavy grazing.

2004 APPARENT TREND ASSESSMENT

Soil shows no sign of erosion due to abundant vegetative and litter cover. Very little pavement or rock on surface or within the profile. Browse species are not a critical component of this spring/summer range, although silver sagebrush provides some forage. Surrounding young aspens may also provide some browse. Understory vegetation has excellent ground cover, which is dominated by Kentucky bluegrass, Thurber fescue, and intermediate wheatgrass. Forbs are also abundant in the understory and provide fair forage.

HERBACEOUS TRENDS --

Management unit 13A, Study no: 17

Type	Species	Nested Frequency	Average Cover %
		'04	'04
G	Agropyron trachycaulum	90	1.20

T y p e	Species	Nested Frequency	Average Cover %
		'04	'04
G	<i>Bromus anomalus</i>	18	.16
G	<i>Bromus inermis</i>	15	.15
G	<i>Carex</i> spp.	21	.38
G	<i>Festuca ovina</i>	1	.03
G	<i>Festuca thurberi</i>	35	2.58
G	<i>Koeleria cristata</i>	8	.06
G	<i>Muhlenbergia</i> spp.	3	.06
G	<i>Poa bulbosa</i>	5	.15
G	<i>Poa pratensis</i>	412	23.08
G	<i>Stipa columbiana</i>	38	1.57
G	<i>Stipa comata</i>	14	.18
G	<i>Stipa lettermani</i>	40	1.11
Total for Annual Grasses		0	0
Total for Perennial Grasses		700	30.73
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F	<i>Achillea millefolium</i>	284	9.53
F	<i>Agoseris glauca</i>	27	.29
F	<i>Antennaria rosea</i>	25	.97
F	<i>Androsace septentrionalis</i> (a)	25	.13
F	<i>Arabis</i> spp.	2	.01
F	<i>Arenaria</i> spp.	49	.85
F	<i>Aster</i> spp.	226	4.76
F	<i>Calochortus gunnisoni</i>	4	.01
F	<i>Carduus nutans</i> (a)	2	.03
F	<i>Cirsium</i> spp.	30	1.26
F	<i>Collomia linearis</i> (a)	8	.01
F	<i>Cymopterus</i> spp.	14	.10
F	<i>Erigeron flagellaris</i>	9	.16
F	<i>Eriogonum ovalifolium</i>	4	.00
F	<i>Geranium richardsonii</i>	5	.33
F	<i>Helenium hoopesii</i>	74	4.26
F	<i>Iris missouriensis</i>	209	13.61
F	<i>Lathyrus lanszwertii</i>	144	2.91
F	<i>Lupinus argenteus</i>	15	.34
F	<i>Phlox</i> spp.	217	3.34
F	<i>Polygonum douglasii</i> (a)	35	.18

T y p e	Species	Nested Frequency '04	Average Cover % '04
F	Potentilla gracilis	28	.53
F	Senecio integerrimus	36	.64
F	Stellaria jamesiana	11	.10
F	Taraxacum officinale	119	1.88
F	Tragopogon dubius	5	.03
Total for Annual Forbs		70	0.35
Total for Perennial Forbs		1537	46.01
Total for Forbs		1607	46.36

Values with different subscript letters are significantly different at alpha = 0.10

BROWSE TRENDS --

Management unit 13A, Study no: 17

T y p e	Species	Strip Frequency '04	Average Cover % '04
B	Artemisia cana	3	.18
B	Potentilla fruticosa	1	.15
Total for Browse		4	0.32

CANOPY COVER, LINE INTERCEPT --

Management unit 13A, Study no: 17

Species	Percent Cover '04
Artemisia cana	.20
Potentilla fruticosa	.20

BASIC COVER --

Management unit 13A, Study no: 17

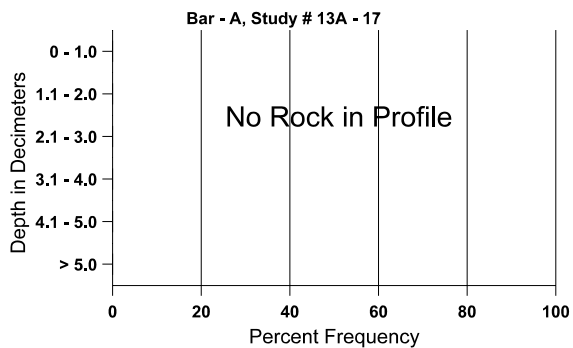
Cover Type	Average Cover % '04
Vegetation	71.99
Rock	.87
Pavement	.97
Litter	30.81
Bare Ground	12.83

SOIL ANALYSIS DATA --

Management unit 13A, Study no: 17, Study Name: Bar-A

Effective rooting depth (in)	Temp °F (depth)	pH	% sand	% silt	% clay	% OM	PPM P	PPM K	ds/m
18.4	46.0 (17.3)	6.1	49.0	33.5	17.5	6.0	4.9	192.0	0.6

Stoniness Index



PELLET GROUP DATA --

Management unit 13A, Study no: 17

Type	Quadrat Frequency	Days use per acre (ha)
	'04	'04
Rabbit	1	-
Elk	5	21 (51)
Deer	-	7 (17)
Cattle	14	44 (109)

BROWSE CHARACTERISTICS --

Management unit 13A, Study no: 17

		Age class distribution (plants per acre)					Utilization					
Y	Plants per Acre (excluding seedlings)	Seedling	Young	Mature	Decadent	Dead	% moderate	% heavy	% decadent	% dying	% poor vigor	Average Height Crown (in)
Artemisia cana												
04	100	-	-	100	-	-	80	0	-	-	0	19/27
Potentilla fruticosa												
04	20	-	-	20	-	-	0	0	-	-	0	17/33